

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KAILASH C. GULATI

Appeal No. 2002-1192
Application 09/256,383

HEARD: February 4, 2003

Before ABRAMS, FRANKFORT, and NASE, Administrative Patent Judges.
FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 4 through 6, 9, 10, 15 and 17 through 20, all of the claims remaining in this application. Claims 1 through 3, 7, 8, 11 through 14 and 16 have been canceled.

As noted on page 1 of the specification, appellant's invention relates to liquefied gas storage tanks and in particular to a tank especially adapted for storing cryogenic liquefied gas (e.g., liquefied natural gas (LNG)) at cryogenic

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temperatures at near atmospheric pressures in areas susceptible to earthquake activity, and to a process for manufacturing such a tank. Independent claims 17, 19 and 20 are representative of the subject matter on appeal and a copy of those claims can be found in the Appendix to appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Lawman et al. (Lawman)	2,331,483	Oct. 12, 1943
Jackson	2,337,049	Dec. 21, 1943
Lalvani	5,505,035	Apr. 9, 1996

Claims 17 and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lalvani.

Claims 4, 6, 10, 15 and 17 through 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lalvani in view of Lawman.¹

¹ As has been repeatedly pointed out by appellant (e.g., in Paper No. 10 and the brief on appeal, Paper No. 13, page 9), the examiner has not expressly treated claim 4 on the merits by including that claim in a stated rejection. However, as appellant has done in the brief (page 9), and given the rejections of dependent claims 5 and 6, we assume for purposes of this appeal that claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Lalvani in view of Lawman.

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Claims 5 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lalvani in view of Lawman as applied above, and further in view of Jackson.

Rather than reiterate the examiner's statement of the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding those rejections, we make reference to the examiner's answer (Paper No. 14, mailed August 28, 2001) for the reasoning in support of the rejections, and to appellant's brief (Paper No. 13, filed June 6, 2001) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determinations which follow.

In rejecting claims 17 and 18 under 35 U.S.C. § 102(b) as being anticipated by Lalvani, the examiner directs us to Figure 2 of the applied patent urging that Figure 2 shows an internal truss braced frame with a plurality of aligned vertical truss structures positioned transversely and longitudinally spaced. In addition, the examiner points to the Abstract of the Lalvani patent noting that it states that the truss frame can be combined with membrane systems and used in environmental structures. The examiner further urges that "[t]he intended use for retaining liquid does not further limit the claims over the structure of Lalvani" and that "[i]t is inherent that the membrane is secured to the outer frame" (answer, page 3). Concerning claim 18, the examiner again directs us to Figure 2 of Lalvani and urges that it shows at least one vertical truss structure positioned longitudinally within the internal truss frame and secured between two adjacent longitudinally spaced vertical trusses.

The patent to Lalvani discloses a building system comprising a family of space frames (e.g., Fig. 2) based on classes of non-regular polyhedral nodes connected by appropriate struts (13 of Fig. 2), wherein the space frames can be converted into panel or plate systems, nodeless space frames, membrane and shell systems,

tensile and tensegrity systems, and various architectural design and construction kits (col. 2, lines 51-58). The patentee notes (col. 2, lines 40-47) that building systems based on non-regular polyhedral nodes expand the architectural vocabulary by providing structures with irregular angles, lengths and faces, while retaining the property of permitting periodic configurations, and also permitting non-periodic configurations, and irregular-random configurations to be formed out of a limited number of building components.

Like appellant (brief, pages 3-9), we find nothing in Lalvani which discloses, teaches or suggests "[a] large, polygonal tank . . . for storing liquids," as is set forth in claims 17 and 18 on appeal. While the Lalvani patent clearly discloses, and shows in Figure 2, a truss-based frame structure useful in architecture on earth and in space for environmental and sculptural structures, platforms, roofs, playground structures, honeycombs, toys, games, and educational kits (Abstract), there is nothing in Lalvani which teaches or suggests that such a frame structure could or should be used in the environment of large, polygonal storage tanks for liquids. Moreover, as has been pointed out by appellant on page 6 of the

brief, there is nothing in Lalvani which teaches or suggests the limitation in independent claim 17 of "a cover sealingly attached to each of said connected vertical and horizontal, elongated supports which form said outer periphery of each of said vertical truss structures for containing said liquids within said tank." The examiner's assertion of inherency in this regard is wholly unavailing, since Lalvani is silent as to how any membrane or plates might be secured to a truss structure like that shown in the patent, and has nothing to do with tanks for containing liquids.

In light of the foregoing, the examiner's rejection of claims 17 and 18 under 35 U.S.C. § 102(b) as being anticipated by Lalvani will not be sustained.

The next rejection for our review is that of claims 4, 6, 10, 15 and 17 through 20 under 35 U.S.C. § 103(a) as being unpatentable over Lalvani in view of Lawman. As noted above, Lalvani discloses a space frame building system based on classes of non-regular polyhedral nodes connected by appropriate struts (e.g., 13 of Fig. 2). Lawman addresses construction of storage tanks intended for the storage of liquids and, more particularly,

tanks for the underground storage of motor spirits and other petroleum products. Like appellant (brief, pages 9-10), we have reviewed these two patents, but find nothing therein which would have led one of ordinary skill in the art at the time of appellant's invention to the combination posited by the examiner or to any combination which would have resulted in the particular internal truss-braced polygonal tank or method of construction thereof defined in the claims before us on appeal. In that regard, we share appellant's view that the examiner's position regarding the purported obviousness of claims 4, 6, 10, 15 and 17 through 20 represents a classic case of the examiner using impermissible hindsight derived from appellant's own disclosure in an attempt to reconstruct appellant's claimed subject matter from disparate teachings and broad concepts purported to be present in the applied prior art.

Since we are in agreement with appellant that the teachings and suggestions which would have been fairly derived from Lalvani and Lawman would not have made the subject matter as a whole of

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claims 4, 6, 10, 15 and 17 through 20 on appeal obvious to one of ordinary skill in the art at the time of appellant's invention, we must refuse to sustain the examiner's rejection of those claims under 35 U.S.C. § 103(a).

We have also reviewed the patent to Jackson applied by the examiner under 35 U.S.C. § 103(a) against claims 5 and 9. However, we find nothing in Jackson which would supply that which we have indicated above to be lacking in the basic combination of Lalvani and Lawman. Thus, the examiner's additional rejection of claims 5 and 9 under 35 U.S.C. § 103(a) will also not be sustained.

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In summary, we note that the decision of the examiner to reject claims 17 and 18 under 35 U.S.C. § 102(b) has not been sustained. In addition, the decision of the examiner to reject claims 4 through 6, 9, 10, 15 and 17 through 20 under 35 U.S.C. § 103(a) has not been sustained. Accordingly, the decision of the examiner is reversed.

REVERSED

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHARLES E. FRANKFORT)	
Administrative Patent Judge)	APPEALS AND
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)	INTERFERENCES
)	
JEFFREY V. NASE)	
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